

APPENDIX F

Sample Quality Review Checklist

Reviewed by: _____		Review Date: _____	
Organization: _____		Rev. Date: _____	
Estimate Type and Phase:			
FOR: _____			
PROJECT: _____			
WORK REQUEST NUMBER _____		WORK REQUEST DATE _____	
SCOPE OF WORK / PROJECT DESCRIPTION			
<u>Provide brief description of project scope, major components, and complexities.</u>			
REGULATION AND GUIDANCE			

Engineer Regulation (ER) 1105-2-100, Planning Guidance Notebook.
 ER 1110-2-1150, Engineering and Design for Civil Works Projects.
 ER 1110-1-1300, Cost Engineering Policy and General Requirements.
 ER 1110-2-1302, Civil Works Cost Engineering.
 Engineer Manual (EM) 1110-2-1304, Civil Works Construction Cost Index System (CWCCIS).
 Engineer Technical Letter 1110-2-573 Construction Cost Estimating Guide for Civil Works
 Engineering and Construction Bulletin No. 2006-5, 12 June 2006, Microcomputer Aided Cost Engineering System (MCACES).
 Corps of Engineers Directorate of Civil Works Planning and Policy (CECW-P)
 Memorandum for Peer Review Process, 30 March 2007
 Engineering and Construction Bulletin No. 2007-17, 10 September 2007, Risk Analysis.

LIST OF DOCUMENTS REVIEWED			
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Main report	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Cost appendix	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Engineering appendix	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Scoping documents	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Estimates of recommended plan in electronic format for MCACES MII and Corps of Engineers Dredge Estimating Program (CEDEP)	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Total project cost sheet – all feature accounts	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Total project schedule – all feature accounts	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Risk analysis for projects (required for project >\$40 million)	
Yes <input type="checkbox"/>	No <input type="checkbox"/>	Labor funding to provide review	

REVIEW ITEMS AND COMMENTS

[Note to reviewer: copy and paste these comments to DrChecks or other document submitted to the customer.]

Cost Summary

\$	RECOMMENDED PLAN CONSTRUCTION ESTIMATE (EXCLUDING CONTINGENCY)
%	PERCENT CONTINGENCY
\$	TOTAL RECOMMEND PLAN CONSTRUCTION COST
	PRICE LEVEL DATE OF THE RECOMMENDED PLAN CONSTRUCTION COST
\$	TOTAL PROJECT COST (CONSTANT DOLLARS)
	PRICE LEVEL DATE OF THE TOTAL PROJECT COST (CONSTANT DOLLARS)
\$	TOTAL PROJECT COST INFLATED THROUGH THE PROJECT SCHEDULE

REPORT CONTENT COMMENTS

(Comments with the corresponding line reference numbered 1.XX)

COMPARATIVE COST ESTIMATES COMMENTS

(Comments with the corresponding line reference numbered 1.3XX)

RECOMMENDED PLAN CONSTRUCTION COST ESTIMATE REVIEW COMMENTS

(Comments with the corresponding line reference numbered 2.XX through 6.XX)

CONSTRUCTION AND PROJECT SCHEDULE REVIEW COMMENTS

(Comments with the corresponding line reference numbered 7.XX)

TOTAL PROJECT COST SUMMARY REVIEW COMMENTS

(Comments with the corresponding line reference numbered 8.XX through 10.XX)

COST ENGINEERING FEASIBILITY AGENCY TECHNICAL REVIEW
CHECKLIST

INSTRUCTIONS: Check items that are approved by the technical review as “Y” for yes or “N” for no. Check “N/P” for items not provided, “N/A” for lines that do not pertain to the level of estimate being reviewed. Fill out "Comment Review Form" or "DrChecks" with the corresponding line reference number. Indicate whether the comments have been submitted in DrChecks.

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.00	Basic Information for Reviewer – SCOPE AND FORM
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.10	Draft Report Document, General
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.101	Is the complete report document provided for this cost review? As a minimum, this should include the main body of the report, the engineering appendix, all cost tables or appendixes, and the project schedule. .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.102	Is the detailed construction cost estimate provided in electronic format? Current software is MCACES MII or CEDEP.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.103	Does the executive summary clearly present the “Total Project Cost” (TPC) inflated through the project schedule? The TPC at the time the project is authorized by Congress becomes the Baseline Cost Estimate (BCE). The BCE is subject to cost limits of Section 902 Water Resources Development Act of 1986. (ER 1105-2-100)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.104	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.20	Draft Report Document, Cost Estimate Report Section
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.201	Does the report include separate sections summarizing the development of screening comparative estimates, the construction cost estimate for the recommended plan, and the TPC (BCE)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.202	Does the cost estimate report section summarize and describe the basis and development of the comparative estimates, such as describing the method of construction, assumptions used in developing the estimate, and the technical/design data available? (ER 1110-2-1302, 3.a.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.203	Does the cost estimate report section clearly indicate, summarize, and describe development of the recommended plan construction cost estimate?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.204	Does the cost estimate report section summarize the uncertainties associated with major cost items in the recommended plan estimate? (ER 1105-2-100, appendix E)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.205	Does the cost estimate report section summarize the cost risk and resulting contingency development for the recommended plan construction cost estimate?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.206	Does the report describe the development of the recommended plan construction schedule and where applicable, development of multiple

Y	N	N/P	N/A		Categories/Questions
					construction contract schedules?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.207	Does the cost estimate report section summarize and describe the basis and development of TPC. For example, the source and basis of; the feasibility report cost (Feature 22), engineering and design (E&D) (Feature 30), construction management (Feature 31), other pertinent feature costs, the price level of the constant dollar estimates (preparation date and program year date), and basis of cost indexes for inflating the project costs (inflated dollar basis) through the project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.208	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.30	Comparative Construction Cost Estimates
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.301	Is the technical/design data, method of construction, and assumptions used for developing the comparative estimates included and described? (ER 1110-2-1302)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.302	Are all comparative cost estimates at the same price level?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.303	Is the TPC of each comparative estimate accurately used in the economic analysis comparisons, such as costs and benefits at the same price level? (ER 1105-2-100)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.304	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.40	Recommended Plan - Construction Cost Estimate
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.401	Does it appear that the scope of the recommended plan has been adequately captured and presented in the construction estimate? If not, provide specific examples.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.402	Is the construction cost estimate prepared using current estimating tools in MCACES (Currently MII and CEDEP)? Engineering and Construction Bulletin, 12 June 2006, MCACES.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.403	Are construction cost estimates at current price levels for the recommended plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.404	Has the estimate been previously reviewed and checked? Date: _____ (ER 1110-1-1300)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.405	Has estimate been approved by Chief, Cost Engineering Branch/Section? (ER 1110-1-1300)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.406	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.50	Construction Schedule(s)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.501	Is the construction schedule(s) based upon the scope of design and details in the cost estimate for the recommended plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.502	

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.60	Project Schedule – Baseline Project Schedule
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.601	Has a total baseline project schedule been provided indicating pre-construction and post-construction award activities for all Features?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.602	Are the construction schedules clearly presented in the project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.603	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.70	Total Project Cost Summary - Baseline Cost Estimate
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.701	Are the costs for lands and damages, all construction features, planning, E&D, and construction management, and all project management included in the TPC?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.702	Are appropriate contingencies included and supported with sound basis?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.703	Are two TPC estimates displayed in the feasibility report; one based on constant dollars and one based on projected inflation rates? (ER 1105-2-100, ER 1105-2-100, 4.3., and ER 1110-2-1302)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.704	Is each contract and/or element of the recommended plan escalated for inflation according to the baseline project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.705	Are the Federal and non-Federal cost share percentages shown and total costs separated accordingly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.706	Is the non-Federal sponsor's obligations clearly shown?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.707	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.80	Engineering Appendix
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.801	Does the design package clearly meet the requirements of ER 1110-2-1150, E&D for Civil Works Projects – Feasibility Stage (Section 13 – Engineering During Feasibility Stage)? http://www.usace.army.mil/publications/eng-regs/cecw.htm
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.802	Scope is extremely important as it affects cost, schedule, and contingency. Has the scope been adequately captured and presented at the prescribed level in accordance with ER 1110-2-1150?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.803	Does reviewer have a clear definition of scope? Provide general comment regarding your confidence in the scope quality provided. - - -
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.804	Does the package meet the requirements within ER 1105-2-100, Exhibit G of the Planning Guidance Notebook?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	1.805	

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.00	Project Description (General Construction Details and Narrative) in the Construction Cost Estimate Project Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.100	Basis of Cost Estimate Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.101	Do the project notes present a clear understanding and definition of scope?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.102	Is the scope in the project notes consistent with the scope of the recommended plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.103	Do the project notes identify documents used as the basis for this estimate?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.104	Are the major project features identified?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.105	Do the project notes identify Federal and non-Federal cost sharing requirements?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.106	Do the notes address significant volatile cost items in the project scope?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.107	Do the project notes describe the process used to establish contingencies, such as a risk analysis, process, concerns?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.108	Do the project notes clarify major assumptions such as acquisition strategy, expected bid competition, prime and subcontractor assignments, major cost quotes, major construction processes, construction phasing and/or sequencing?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.109	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.20	Basis of Construction Schedule Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.201	Is the construction schedule consistent with the baseline project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.202	Are dates for completion given, milestone dates set?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.203	Are construction windows or limitations considered and documented?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.204	Do the notes identify inflation points (beginning or midpoint of construction) consistent with the project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.205	Do the notes address number of crews, shift work, and overtime?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.206	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.30	Construction Estimate Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.301	Are general assumptions noted in the project notes and are they reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.302	Is site access considered and presented in the notes?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.303	Are borrow areas needed and identified?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.304	Are unusual conditions (soil, water and water diversion, hazardous materials, weather) considered and documented in the estimate notes?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.305	Are unique construction techniques considered and documented?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.306	Do the notes address equipment availability and distance traveled?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.307	Do the notes address labor availability and distance traveled?

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.308	Do the notes address material availability and distance traveled?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.309	Are environmental concerns during construction documented in the notes?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.310	Is there an Acquisition Plan? (When and what method of acquisition)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.311	Is there a subcontracting plan and subcontract crafts identified?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.312	Are effective dates for pricing labor, equipment, and material given?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.313	Are estimate supporting databases listed, current and up-to-date for the location?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.314	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4D	Dredging Estimate Notes
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4D1	Do the project notes include a narrative presenting the rationale used by the cost engineer for dredging equipment selection?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4D2	Do the project notes describe the basis for production rates?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4D3	Do the notes adequately address containment and disposal areas?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.4D4	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	2.40	Question, at this point do you, the reviewer, have a good understanding of the project?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.00	General Estimate Layout - Title Structure (Work Breakdown Structure)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.01	Is the estimate in proper Work Breakdown Structure (WBS) format in accordance with all guidelines?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.02	Does the WBS adequately reflect all project scope?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.03	Are the title structure and the descriptions adequate to determine what was being estimated?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.04	Were good unit title task costs/assemblies developed to depict a complete estimate?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.05	Were good unit title task costs/assemblies developed to demonstrate reasonable costs and unit prices?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.06	Were good unit title task costs/assemblies developed to support the development of a reasonable construction schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3.07	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.00	Construction Estimate Details – Unit Price Book Items Used to Develop Assemblies
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.10	General Details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.101	Is the estimate detail traceable back to the scope package?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.102	Does the estimate separate and include all major items scoped in the recommended plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.103	Does the estimate detail the assumptions made for development of the detailed cost items?

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.104	Do quantities appear reasonable and consistent with the recommended plan?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.105	Are note fields used to briefly explain the detail costs?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.106	Does the estimate organize and present a logical sequence of work?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.107	Are critical quantities and costs identified in the estimate details?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.108	Does the estimate contain specific detail to make judgment on whether costs are reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.109	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.20	Labor and Equipment
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.201	Are the actual labor rates reasonable? Check specific rates.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.202	Do the labor rates reflect current market and locale such as rural or metro availability?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.203	Review the estimate settings for overtime and any other modifiers. Is any overtime used judiciously for critical-path elements?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.204	Are the actual equipment rates reasonable? Check specific rates.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.205	Does crew makeup appear reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.206	Are crew production rates reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.207	Were equipment fuels updated to current rates?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.208	Does the estimate clearly indicate that the costs for dredge plant are based on historical data or CEDEP?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.209	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.30	Materials
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.301	Are appropriate allowances applied to items where loss due to handling, placement, cutting, transportation, contamination, etc.?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.302	Does earthwork items make distinction and reasonable assumptions for bank cubic yards, loose cubic yards, and embankment cubic yards?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.303	Are critical or volatile materials and quantities identified at the detail level?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.304	Are major material quotes identified with quote source documentation?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.305	Does the estimate clarify/include transport costs?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.306	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.40	Mobilization - Preparatory Work, Demobilization – Cleanup
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.401	Are mobilization and demobilization costs detailed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.402	Does the total mobilization and demobilization cost appear reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.403	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D1	Dredge work: does the estimate include preparation of dredge attendant plant for transfer, the cost to move all plant and equipment return of tug or towing vessel, and preparation of the plant to start

Y	N	N/P	N/A		Categories/Questions
					work?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D2	Dredge Work: Does the estimate clearly include a construction support site?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D3	Dredge Work: Does the estimate present the reasons for using a different distance for demobilization?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D4	Dredge Work: Does the estimate include all costs to secure machinery and equipment for storage?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D5	Dredge Work: Does the estimate clearly include indirect costs in the mobilization and demobilization pay item?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.4D6	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.50	Miscellaneous Estimate Details
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.501	Are volatile cost items identified? Check major items that affect cost.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.502	Do major cost items reflect a reasonable unit of measure to ascertain a unit cost?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.503	Do major unit prices appear reasonable for the locale? (Concrete, steel, earthwork, fabrication, etc.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.504	Are major construction concerns considered such as site access, care and diversion of water, etc.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.505	Are any costs developed for Hazardous, Toxic, and Radioactive Waste concerns?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.506	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.5D1	Dredge Work: Where applicable, are pipeline dredging gross production costs consist of costs associated with dredging time, not by element of work?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.5D2	Dredge Work: Where applicable, are hopper and mechanical dredge gross production costs based on excavation time, transport time, and disposal time?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.5D3	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.60	Subcontracting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.601	Are subcontractor assignments and markups reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.602	Does the estimate identify subcontract quotes (dependent on type of estimate)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.603	Has an appropriate consideration been made in addressing multi-tier subcontracting for specialty items?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	4.604	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.00	Construction Cost Summary, Including Indirect and Markups
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.01	Are appropriate taxes included or excluded as may be required?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.02	Is the field office overhead reasonable for this project?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.03	Does the home office overhead look reasonable for this type of work?

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.04	Is profit reasonable and was the weighted guideline method used to calculate it?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.05	Does bond seem reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.06	Are all costs at the same price level?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	5.07	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.00	Risk Analysis and Contingency (required over \$40 million)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.10	Risk Analysis
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.101	Does the estimate include a discussion of the uncertainties associated with each major cost item? (ER 1105-2-100, appendix E)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.102	Was a risk analysis completed and documented using accepted software?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.103	Was the analysis supported by market research?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.104	Did the project delivery team provide input for the risk analysis?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.105	Are key variables identified and considered?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.106	Is scope quality and detail addressed?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.107	Are key design elements considered within the study?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.108	Is volatile pricing considered?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.109	Is material availability and transport considered?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.110	Is unique construction considered?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.111	Is schedule (restrictive or permissive) considered?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.112	Are there any other key variables requiring consideration?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.113	Does risk consider acquisition strategy?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.114	Does the analysis consider potential savings such as value engineering and alternatives?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.115	Are the contingency allowances a result of a risk analysis?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.116	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.20	Contingency
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.201	Do the applied contingency rates appear reasonable for each major cost item?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.202	Does the overall contingency rate appear reasonable?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.203	Does the contingency reflect a confidence value near 80 percent?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	6.204	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.00	Schedules
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.10	Construction Schedule
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.101	Are construction schedules clearly presented in the feasibility report?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.102	Does the schedule identify critical aspects of the construction?

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.103	Are key milestones depicted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.104	Does the construction schedule reflect reasonable logic of activities?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.105	Does the construction schedule indicate a likely critical path?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.106	Are all activities tied?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.107	Does the construction schedule consider crew sizes, numbers of crews, related productivity?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.108	Do construction schedules make distinction between single shift and double shift?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.109	Does the estimate and risk analysis reflect the schedule (i.e., overtime usage, numbers of crews, numbers of shifts, critical delivery aspects, concurrent activities, etc.)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.110	Do construction schedules depict critical or time-sensitive orders or procurements?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.111	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.20	Project Schedule
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.201	Does the project schedule include all activities for Total Project such as planning, E&D, advertising and award, construction, and closeout and turnover to sponsor?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.202	Does the project schedule clearly present dates to determine inflation based on escalation indexes, i.e., the activity beginning date or the activity midpoint?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	7.203	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.00	Total Project Cost Summary in Current Dollars
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.01	Is there a proper TPC worksheet?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.02	Is the price level date shown and is it consistent with the estimate preparation date?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.03	Are all the project-related Civil Works WBS Features shown in the TPC Summary?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.04	Do the Lands and Damages cost (01 Feature) provided by Real Estate Division include contingencies?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.05	Are Relocations (02 Feature) accurately separated and shown?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.06	Are costs for Cultural Resources (18 Feature) included?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.07	Is the basis of the Cultural Resources costs noted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.08	Are the feasibility study costs (22 Feature) shown and included in the TPC?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.09	Is the basis of the feasibility study costs noted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.10	Is the basis of the 30 and 31 feature costs noted?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.11	Does the E&D clearly include costs for project management, planning and engineering, E&D, independent technical review and value engineering, contracting, reprographics, engineering during construction, planning during construction, project operation?

Y	N	N/P	N/A		Categories/Questions
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.12	Are reasonable percentages used to develop costs for E&D (30 Feature)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.13	Are reasonable percentages used to develop costs for Construction Management (31 Feature)?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.14	Are contingencies separately shown for each Feature?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	8.15	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.00	Total Project Cost Inflated (using escalation indexes) go the Project Schedule
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.01	Is the contingency allowance consistent with the TPC in current dollars?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.02	Are the work breakdown codes (Feature Codes) shown in the inflated TPC Summary?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.03	Are all features and elements inflated through the project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.04	Are the escalation dates shown for each inflated feature?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.05	Are the escalation dates consistent with the project schedule?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.06	Are inflated TPCs based on price indexes from the current CWCCIS, EM 1110-2-1304?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.07	Are inflation percentage rates shown for each feature?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.08	Are inflation percentages calculated correctly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.09	If Lands and Damages are inflated, is the escalation for inflation based on the Consumer Price Index?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.10	Does the inflated TPC include any escalation beyond CWCCIS guidance based on market research?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.11	Does the feasibility report present the basis and rationale for inflating the project cost using something other than CWCCIS guidance?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	9.12	
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.00	Federal and Non-Federal Costs
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.01	Are the Federal and non-Federal cost share percentages shown?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.02	Is the feasibility report cost share clearly shown?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.03	Is the project cost share percent consistent with the feasibility cost sharing agreement?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.04	If applicable, is the cost/value of non-Federal in-kind services shown?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.05	Are cost shares calculated correctly?
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	10.06	